examples covering many situations and from many countries. A few of the more interesting examples include:

- Extracting EMA Data from Enterprise Resource Planning – Austria
- Materials Flow Cost Accounting – Germany
- Materials Flow Cost Accounting – Japan
- EMA for Logistics Management – UK and the Netherlands
- Fujitsu’s “Cost Green Index” - Japan

• EMA for New Product Development – Argentina

The full text of the IFAC guidance booklet is available free of charge from the IFAC web site. You can find it at http://www.ifac.org/store

Thank you very much indeed for your attention.

SUSTAINABILITY AND THE NEW ZEALAND INSTITUTE OF CHARTERED ACCOUNTANTS REVISED STATEMENTS OF LEARNING OUTCOMES

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Introduction

This article provides a brief overview of the review of Statements of Learning Outcomes (SLOs) carried out by the New Zealand Institute of Chartered Accountants (the Institute) in early 2006 as part of the review of the academic admission requirements of the College of Chartered Accountants.

It also reflects on the submission made by the Committee of the Sustainability Working Group (a volunteer special interest group) and encourages academics and their tertiary institutions to provide additional focus on ‘sustainability’ in their teaching.

The Sustainability Working Group, attached to the Institute, operates nationally and is a special interest group of volunteers.

As a precursor to post-university professional papers and practical experience requirements, the Institute requires a bachelor level degree of four years equivalent full-time study. These degree-level requirements are outlined in the SLOs.

Statements of Learning Outcomes

The SLOs provide guidelines for the minimum requirements in terms of knowledge and skills that students should be able to demonstrate after completing a course or courses on a topic required in the academic component of the admission policy. The compulsory topics reflected in the ten SLOs are:
1. Advanced financial accounting
2. Advanced management accounting
3. Auditing
4. Taxation
5. Accounting information systems
6. Business finance/treasury
7. Economics
8. Organisational management
9. Quantitative methods/statistics
10. Commercial law

Also required is compulsory coverage of two further stage 3 (or higher) accounting or business courses, plus at least 15% liberal studies.

The SLOs are broad and high-level statements which reflect the minimum core areas expected to be covered within a required topic. They are:

- not a prescription for course(s) development;
- not intended to constrain creativity and leadership of academic staff who design and teach course(s) within a required topic; and
- not intended to limit the scope and level of the topics taught at the Institute-approved tertiary institutions.

There is no expectation that the minimum outcomes for a particular topic will be covered by one course. It is anticipated the content of a topic may be taught across different courses at different levels. The spread of the topic content is an educational institution’s choice. If they wish, institutions may also offer other subjects in their bachelor degree courses.

It is noted there is a view among some academics that not all of the specified learning outcomes could possibly be taught in the 13 to 17 week semesters currently used by tertiary institutions.

Consultation on SLOs

The Institute undertook its consultation on SLOs in two stages:

- Stage One (Nov – Dec 2005) the Institute sought and received input on SLOs from Institute-approved tertiary institutions, and specifically, from discipline experts; and
- Stage Two (March – April 2006) carried out full public consultation, including another round of consultation with academe.

Feedback received was considered by the Institute’s Academic Committee during its meetings in December 2005, February 2006, March 2006 and April 2006. Submissions were received from a wide spectrum of the Institute’s stakeholders and represented a variety of views and recommendations.

The Sustainability Working Group had prior knowledge of the pending public consultation and received formal advice on 28 March. The closing date for submissions was 18 April, with the Academic Committee due to meet on 20 April. The Sustainability Group’s very hurriedly prepared submission lodged on the 19 th was immediately emailed to members of the Academic Committee to maximize the chance of it being afforded due consideration.

The Academic Committee comprises five academics, two are Fellow CA’s, and one CA practitioner from a small practice in a provincial city and a member of the Institute’s Council.
Submission

The Sustainability Working Group’s thirty-six page submission contained twenty-seven suggestions. The Academic Committee devoted considerable time to discussion of the submission at its meeting in April.

An analysis of the final documents shows that the Committee made fourteen changes as a result of the submission process or otherwise:

- 5 deletions;
- 6 changes in accord with arguments put forward in the Sustainability Group’s submission; and
- 3 other changes.

Opportunities Available within Individual Statements of Learning Outcomes

As mentioned earlier, the content within topics to be taught is broad and not prescriptive, giving institutions and teachers a high degree of flexibility as to content. Therefore, within the prescribed learning outcomes ‘sustainability’ thinking can be readily introduced by teachers/institutions. For example, in Advanced Financial Accounting nine areas were identified, such as:

- define the current characteristics of accounting, explain its role in society and in the economic sphere;
- describe and explain current research issues in financial accounting;
- critically examine the history of accountancy profession and accounting thought;
- evaluate theoretical foundations of accounting; and
- describe and explain alternatives to traditional profit-orientated financial reporting.

Areas for Significant Future Progress

The key area in which ‘sustainability’ ideas did not make progress was Economics where a broader view than that normally taught was sought. That broader view sought to introduce learning related to environmental (i.e. resource extraction) and ecological economics (including The Natural Step and GRI capital method), understanding the limitations of GDP and understanding the notions of wellbeing and genuine progress indicators.

The Sustainability Group’s view is that considerable changes are required in relation to the teaching of economics and that for example ‘growth’ of itself is not necessarily a good thing; especially as measured by GDP which, for example, measures as positives the economic activity arising from motor vehicle accidents (repairs to people and property and downstream adverse economic and social impacts).

Other areas where the Group sought changes and where progress was not achieved included:

- **Advanced Management Accounting.** “Demonstrate a knowledge of the need for and methods of full lifecycle costing including purchase, operations and maintenance and disposal” and “Recognise/ or describe/ or understand accountants’ role as a steward of financial, economic, social and environmental resources”;

- **Auditing.** “Understand the key differences between auditing financial and non-financial information” and
“Understand the key issues pertaining to non-financial auditing such as GRI/AA 1000 and HSE and sustainability auditing”; and

- **Business finance/treasury.** “An understanding of and the need to consider non-financial issues such as impacts on society and the environment of assessment methodologies and decisions.”

**Roll Out of the SLOs**

In May 2006 New Zealand’s tertiary education providers received revised Statements of Learning Outcomes from the Institute. These revised statements which arise from deliberations of the Academic Committee are effective from 2007.

**Lessons**

Questions arise as to whether the Sustainability Group could have been more successful by involving itself earlier in the process. Although some attempts were made these were not successful either because the Group was not sufficiently pro-active and/or because the opportunity to engage did not seem to be apparent. Changes in key staff within the Committee’s secretariat could also have been a factor.

In the earlier consultation stage additional pro-activity would have required the Group to engage individually with members of the Academic Committee, academics and all (or key) tertiary institutions. However, the Group does not have sufficient people resources to do so. And even though some of the Group’s committee members are academics this could have been very difficult for them to take on because ‘sustainability’ is just one of a raft of other ‘emergent’ issues across the whole curriculum – aside from institutional issues.

Therefore what academics, individual members of professional accounting bodies and special interest groups can do, when similar reviews of admission requirements arise in their jurisdictions, is to ensure they participate fully in them and be pro-active in the process as early as practicable. Part of this is to ensure those involved in the review process are appraised of developments in ‘sustainability’ and the drivers for those developments.

As an example of action which can be taken the Sustainability Group over an extended period provided information to the Institute regarding significant developments occurring in this area to ensure they were briefed on an ongoing basis.

Readers of this article will realise students are being prepared for contributions to society which will occur for forty or more years and as community leaders chartered accountants can be leaders with considerable influence across society. Hence every practicable step should be taken to ensure academic requirements are future focused.

**Other Opportunities to Influence**

In theory – the theory arising from the considerable limitations on the Group’s resources – the Group could now approach tertiary institutions and/or teachers individually and seek to influence the content of their teaching within existing topics and prescribed learning outcomes. There may be several ways of doing that and the Group has yet to consider whether it wishes to engage at that level and if so how it might go about the task.
A Postscript - Ideal World

Ideally if a greater number of teachers – preferably all of them – had personal values and ethos which leaned towards the ‘sustainability’ way of thinking then there might not be a need to be prescriptive as the thinking would be there and would be a natural outcome of teaching style and content. The thinking would ‘just happen’. Utopia perhaps…..

THE ETHICS OF CLIMATE CHAOS

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The scientific evidence for climate change is now overwhelming. Almost every day we hear news of yet another study that documents the actual changes to our formerly predictable weather patterns and biophysical processes. We all now see and read about the economic, health, psychological and ecological impacts of the increasing frequency and intensity of hurricanes such as Katrina and Larry. There are places on earth where climate change is happening so rapidly that people have new words to describe the shock of change in what was once a reasonably reliable and predictable context. The Inuit of the Arctic have applied a word, ‘uggianaq’, which has connotations of a “friend acting strangely” or unpredictable behaviour to the way climate change is impacting on culture.

Our world is beginning to act in strange ways but what is even stranger is that in the face of such change, we are not acting quickly enough to counter the prospect of catastrophic risk to all future activity in our economies and our cultures.

You might have thought that the ethics of actually changing the global climate would have been on the top of the agenda in all of the recent talkfests on long-term energy policy. After all, what is at stake with the issue of greenhouse gas emissions and global warming is the future environmental security of all beings on the planet and in particular, the ability of humans to cope with massive but largely unpredictable changes to every aspect of their lives.

In a world operating under complex and unstable conditions, adaptation to the impending changes will be largely impossible because all current forms of planning are based on data and predictions linked to the past. However, in the brave new world, there will be many surprise events in the emergence of complex non-linear systems acting under new factors driving their evolution. Such system unpredictability will render useless many of the institutions and methodologies created to